

Phil Hayward

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Professional Summary

Senior Full-Stack Software Engineer with 25+ years of experience building secure, regulated, and data-intensive applications in pharmaceutical R&D, clinical simulation, and digital health-adjacent domains. Proven success delivering C#/.NET Core solutions, RESTful APIs, and containerised cloud services (AWS/Azure) that ensure scientific accuracy, regulatory compliance, and user-centric workflows. Adept at collaborating with cross-functional teams—including pharmacologists, clinicians, product owners, and QA—to translate complex scientific and operational requirements into robust, scalable software. Passionate about leveraging technology to improve health outcomes and professional training experiences.

Technical Skills

- **Languages:** C#, C++17, Python, JavaScript/TypeScript, R
- **Frontend:** React, Blazor, WPF/MVVM, MVC
- **Backend:** .NET Core, REST/gRPC, Entity Framework
- **Databases:** SQL Server, MySQL, PostgreSQL, Azure SQL, Oracle
- **Cloud & DevOps:** AWS (API Gateway, container debugging via SSH), Azure (Managed Identities, Key Vault, Functions), Docker,
- **CI/CD, Git, Jira**
- **Data Engineering:** ETL pipelines, data anonymisation, Power Query, OpenXML
- **Architecture:** Multi-threaded systems, microservices, secure-by-design, high-availability applications
- **Domain Expertise:** Pharmaceutical R&D, clinical trials, regulatory-compliant systems, oncology drug development

Professional Experience

Full-Stack Developer

Dec 2024 – Present

Brand & Deliver – Sheffield (Hybrid)

- Architected .NET 9 / React (TypeScript) SaaS applications on Azure.
- Built Python ETL pipelines for automated content ingestion into Azure SQL.
- Designed and shipped accessible Blazor/React UIs for non-technical marketing teams, reducing support requests through intuitive workflows.
- Eliminated hardcoded credentials by implementing Azure Managed Identities and Key Vault, strengthening security and compliance.

Lead Software Engineer

Nov 2021 – Oct 2024

Lockwood Publishing – Nottingham (Remote)

- Led cryptographic upgrades across AWS infrastructure, including endpoint security hardening.
- Delivered test automation frameworks using Python/.NET and Android testing tools; enhanced Unity UI components.
- Enabled advanced analytics via Snowflake and Excel Power Query.
- Led end-to-end rollout of a global consent management platform across 12 regions, aligning data practices with GDPR, CCPA, and LGPD—reducing legal risk through centralised user preference controls.

Senior Software Engineer

2008 – Nov 2021

Certara (Simcyp) – Sheffield

- Core developer of the SimCYP ADME Simulator, used by global pharma companies and regulatory agencies (FDA, MHRA) to predict drug behaviour in virtual populations.
- Built C# WPF/MVVM frontends and high-performance C++17 simulation engines.
- Reimplemented pharmacokinetic models (R/Matlab → C++17) for real-time drug metabolism simulation; validated results weekly with clinical pharmacologists.
- Built statistical models and reporting systems for biologics and antibody-drug conjugate simulations supporting oncology drug development.
- Designed anonymised ETL data pipelines for the EU IMI ORBITO grant project (C#/Azure).
- Hired and line-managed QA engineering team; delivered global product training.

Senior Software Engineer (Security & Surveillance)

2001 – 2008

Synectics Systems / CoVi Technologies

- Developed real-time C++ video surveillance systems for critical infrastructure.
- Built forensic-grade, multi-threaded network playback systems.
- Designed C#/ASP.NET ANPR (automatic number plate recognition) and control room solutions.

Education

BSc (Hons) Software Engineering (2:1) – Sheffield Hallam University, 1996

Continuous Learning

- AWS & Azure Fundamentals
- Data Engineering with Python and R
- Advanced C++ and System Architecture
- PRINCE2 Certified, Agile/Scrum